



Automatic Digital Loss Factor Analyser

# AFP ranges

## TECHNICAL SPECIFICATIONS



### General information

Vettiner among world longest experience specialist of tan d Test since 1933. Our tan d and capacitance products are ones of the most accurate Tan D tester in HV on the market.

### Main applications

Dielectric insulation qualification / status  
 Power / Instrument Transformers insulation  
 Generators / bars insulation  
 Coils insulation  
 Cable insulation  
 Power Capacitors insulation  
 Liquid / solid dielectric samples  
 All HV equipments insulation  
 Laboratories, Production & Maintenance

### Calibration

Easy check & easy calibration  
 Vettiner calibration certificate included (BNM Traceable)\*  
 \*External laboratory calibration (ISO 17025,...) under request

### Measurement

Almost instantaneous with 1s measurement achievement  
 Vectorial Measuring Structure  
 Measuring Modes UST, GST & GSTg  
 Balancing Modes Automatic

### Main Measured Values (All displayed)



AFP 400	Ranges	Display	Resolution	Accuracy
Voltage*	0-2kV or 5kV	4 dgts.	1V	1.0 % ± 1 dgt
Current*	0 - 20 mA & +	3 dgts.	0.1 μA	1.0 % ± 1 dgt
Frequency*	45 - 65 Hz & +	3 dgts.	0.1 Hz	0.1 % ± 1 dgts
Capacitance*	0 - 32 nF & +	4 dgts.	0,01 pF	0.5 % ± 1 dgt
Tan Delta - Tan d*	0 - 100 % & +	5 dgts.	1.10 <sup>-4</sup> -100 ppm	1.0 % ± 1.10 <sup>-3</sup>
P. factor - cos f	0 - 1	3 dgts.	0.01	1.5 % ± 1 dgt
Watt Loss	0 - 100 kW	4 dgts.	10 μW	1.5 % ± 1 dgt
Permittivity - er	0 - 30	3 dgts.	0.01	1.5 % ± 1 dgt

Some of the above technical data are valid at the above-mentioned date but could change without any notice at any time (Ex. dimensions or weight or else...)



### AFP 500

	Ranges	Display	Resolution	Accuracy
Voltage*	0-2 kV or 5kV	4 dgts.	1 V	1.0 % ± 1 dgt
Current*	0 - 20 mA & +	3 dgts.	0.1 µA	1.0 % ± 1 dgt
Frequency*	45 - 65 Hz & +	3 dgts.	0.1 Hz	0.1 % ± 1 dgts
Capacitance*	0 - 32 nF & +	4 dgts.	0,01 pF	0.5 % ± 1 dgt
Tan Delta - Tan d*	0 - 100 % & +	5 dgts.	1.10 <sup>-4</sup> -100 ppm	1.0 % ± 1.10 <sup>-3</sup>
P. factor - cos f	0 - 1	3 dgts.	0.01	1.5 % ± 1 dgt
Watt Loss	0 - 100 kW	4 dgts.	10 µW	1.5 % ± 1 dgt
Permittivity - er	0 - 30	3 dgts.	0.01	1.5 % ± 1 dgt



### AFP 600

	Ranges	Display	Resolution	Accuracy
Voltage*	0-2 kV or 5kV	4 dgts.	1 V	1.0 % ± 1 dgt
Current*	0 - 20 mA & +	3 dgts.	0.1 µA	1.0 % ± 1 dgt
Frequency*	45 - 65 Hz & +	3 dgts.	0.1 Hz	0.1 % ± 1 dgts
Capacitance*	0 - 32 nF & +	4 dgts.	0,01 pF	0.5 % ± 1 dgt
Tan Delta - Tan d*	0 - 100 % & +	5 dgts.	1.10 <sup>-4</sup> -100 ppm	1.0 % ± 1.10 <sup>-3</sup>
P. factor - cos f	0 - 1	3 dgts.	0.01	1.5 % ± 1 dgt
Watt Loss	0 - 100 kW	4 dgts.	10 µW	1.5 % ± 1 dgt
Permittivity - er	0 - 30	3 dgts.	0.01	1.5 % ± 1 dgt

\*better on request

## Other Tests or interfaces

Ambient Temperature T °C & Hydro %

Option: Local Temp. T °C / PT100, Resistivity r

Software to drive tests, manage tests results...

Interface: RS 232, USB for results storage or printer...

## Cases

All AFP products are available in carrying case, in black or Yellow, or in rack case.

	Carrying case	Rack case
Dimension	465 mm x 370 mm x 175 mm	520 mm x 400 mm x 200 mm
Weight	15 kg	20 kg

## Option and accessories

Ref	Description	
SCT	Connection Terminals	UHF by default - Lemo under request
TCA AFP XX	Measuring cables - XX m under request	XX m under request
PT/AFP	Measure & display of local Temp.	According to application
r/AFP	Measure & display of resistivity r in DC	According to application
SS XX	Additional shunt or CT / high current tests	According to application
AFP PPACK	Special protection / proof container	To be agreed
SD/CS/CG	Std Capacitor Cn / Divider included	2 or 5 kV
AL XX-YY	HV Generator, included or separated	2 or 5 kV / 20 mA
SCL/SCS	Sample test cell, liquids or solids	To be agreed
SC/SH	Heating Control for self-heating test cells	To be agreed
TRAIN	Eventual training	To be agreed, free in our premises
INSTAL.	Eventual on site setting up	To be agreed
EOR	Eventual other requests	To be agreed, Ex: On site tests

All options and accessories specifications under request

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